

AMENDMENTS TO THE CLAIMS

1. (Currently Amended): A system having diamond-like carbon (DLC) contact surfaces, comprising:

relatively movable, facing contact surfaces at least one of which is coated with DLC, and

a lubricant for a system having DLC contact surfaces interposed between said contact surfaces, said lubricant fulfilling following conditions (a), and (b), (c), and (d):

(a) wherein said lubricant for a system having DLC contact surfaces comprises a lubricant base oil (A) containing, as a main component, a base oil (X) consisting at least one of a hydrocracked mineral oil, a wax-isomerized mineral oil, and a poly- α -olefin base oil, wherein said base oil (X) has a kinematic viscosity of 2 to 20 mm²/s at 100 °C, a total aromatic content of not higher than 5 mass%, and a sulfur content of not higher than 0.005 mass%; and

(b) wherein said lubricant for a system having DLC contact surfaces has a sulfur content of not higher than 0.2 mass%;

(c) wherein said lubricant comprises a sulfur-free metal detergent (B); and

(d) wherein said lubricant is free of sulfur-containing additives selected from the group consisting of zinc dithiophosphate, sulfur-containing metal detergents, and mixtures thereof.

2. (Currently Amended): The system according to claim 1, wherein said lubricant for a system having DLC contact surfaces further comprises at least one of a sulfur-free metal detergent (B), a sulfur-free phosphorus compound (C), and a sulfur-free ashless anti-oxidant (D).

3. (Original): The system according to claim 1, wherein said lubricant for a system having DLC contact surfaces further comprises a friction modifier consisting at least one of an oxygen-containing organic compound and aliphatic amines.

4. (Original): The system according to claim 1, wherein said contact surfaces comprise contact surfaces in an internal combustion engine.

5. (Currently Amended): A method of lubricating DLC contact surfaces, comprising lubricating relatively movable, facing contact surfaces at least one of which is coated with DLC, with a lubricant for a system having DLC contact surfaces interposed between said contact surfaces, said lubricant fulfilling following conditions (a), and (b), (c), and (d):

(a) wherein said lubricant for a system having DLC contact surfaces comprises a lubricant base oil (A) containing, as a main component, a base oil (X) consisting at least one of a hydrocracked mineral oil, a wax-isomerized mineral oil, and a poly- α -olefin base oil, wherein said base oil (X) has a kinematic viscosity of 2 to 20 mm²/s at 100 °C, a total aromatic content of not higher than 5 mass%, and sulfur content of not higher than 0.005 mass%; and

(b) wherein said lubricant for a system having DLC contact surfaces has a sulfur content of not higher than 0.2 mass%;

(c) wherein said lubricant comprises a sulfur-free metal detergent (B); and

(d) wherein said lubricant is free of sulfur-containing additives selected from the group consisting of zinc dithiophosphate, sulfur-containing metal detergents, and mixtures thereof.

6. (Currently Amended): A lubricant for a system having DLC contact surfaces, said lubricant being for lubricating relatively movable, facing contact surfaces at least one of which is coated with DLC, and fulfilling following conditions (a), and (b), (c) and (d):

(a) wherein said lubricant for a system having DLC contact surfaces comprises a lubricant base oil (A) containing a base oil (X) as a main component, said base oil (X) consisting at least one of a hydrocracked mineral oil, a wax-isomerized mineral oil, and a poly- α -olefin base oil, and having a kinematic viscosity of 2 to 20 mm²/s at 100 °C, a total aromatic content of not higher than 5 mass%, and a sulfur content of not higher than 0.005 mass%; and

(b) wherein said lubricant for a system having DLC contact surfaces has a sulfur content of not higher than 0.2 mass%

(c) wherein said lubricant comprises a sulfur-free metal detergent (B); and

(d) wherein said lubricant is free of sulfur-containing additives selected from the group consisting of zinc dithiophosphate, sulfur-containing metal detergents, and mixtures thereof.

7. (Currently Amended): The lubricant according to claim 6, further comprising at least one of a ~~sulfur-free metal detergent (B)~~, a sulfur-free phosphorus compound (C), and a sulfur-free ashless anti-oxidant (D).
8. (Original): The lubricant according to claim 6, further comprising a friction modifier consisting at least one of an oxygen-containing organic compound and aliphatic amines.
9. (Cancel)